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The March for Science, Geneva 22 April 2017

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In the following we print two texts covering the international *March for Science* on 22 April 2017. The first one is an extract from a statement, published on the SPS web-page before the March.

The second text is a kind of testimony by two of the 15 organizers of the March for Science in Switzerland, *James Beacham* and *Courtney Thomas*. Its content results of the brainstorming and synthesis of a team of 15 people, who - how explained in the article - met numerous times to reach consensus on the motivations of the March in Geneva and the shape that it should take. Although the March in all the countries around the world was definitely triggered by the governmental actions in the US, the organizers were very attentive not to focus on a particular case, but rather to take this case as a stimulus for sustained an awoken attitude in front of all kind of actions fighting science and the hard facts science is producing.



More than 600 participants gathered for the March for Science in Geneva. (Photos: A. Pochelon)

The ideas of this text were presented orally on 22 April in Geneva as an introduction to the March. In short it remembers us that "In order to continue to support science and be supported by the public, we must remain attentive". The accompanying photographs remember the good mood of the March in Geneva and highlight some of the ideas expressed on the banners of the participants. A lot more can be found on the site of the March of Science Geneva (<http://marchforsciencegeneva.org/>), like in particular the links to the dozen articles that appeared in the Swiss media before and after the March.

About research in general and with focus on Switzerland

In Switzerland, we, physicists, and specially those of us engaged in research, enjoy ideal conditions. The political level, be it at the governmental or at the parliamentary one, is fully convinced about the necessity to support both fundamental and applied research and has a full trust in the way we conduct our research. We perform our work, following our fundamental ethical rules: scientific facts and theories are the only driving forces. We also enjoy complete political freedom within our institution and no one is trying to impose on us any view on this or that issue, especially on scientific ones. Our colleagues are women and men from all countries in the world, encompassing their diversity, religion or race: we consider this as an enrichment both for science and for our own life.

The freedom we enjoy here in Switzerland, however, is not granted everywhere on our planet. Scientific core values of basic research, of decision taking based on all facts and knowledge available, of open discussion and exchange of ideas, are at threat even in modern societies. A threat so

strong that scientific ethical rules that all stringently impact on the social life, not only of scientists, but of society as a whole are endangered and pose not only perceived dangers, but pose a real danger on the further prosperity of humankind in the generations to come. Thinking of climate change, energy research, health, food, clean water, etc., these dangers become evident.

We believe that collaboration is the condition for the advancement of science and for the establishment of peace between nations: CERN was established as a tool to promote peace between European nations after the Second World War and more recently SESAME followed the same ideal in the Middle East. Therefore, we shall always support and defend policies, which favour and strengthen collaboration.

*Minh Quang Tran, SPS President,
Hans Peter Beck, SPS Vice President*

Report of the organizers of the March for Science, Geneva, sharing the motivations that led to the March

James Beacham, CERN, Courtney Thomas, EPFL

On 22 April 2017, hundreds of people from around Switzerland gathered in Geneva for the March for Science, to affirm that science belongs to everyone and that facts are real.

Yes, it's completely bizarre that we had to march for something that seems so obvious.

But we live in bizarre times. We live in a time when major governments around the world are attempting to undermine the concept of objective, scientific truth — and the concept of the fact itself — to gain political and financial power. We

live in a time when populist, anti-science movements are gaining strength through dishonest manipulation and by portraying scientists as elitists who make random declarations according to whim or as frivolous intellectuals wasting taxpayer money on useless, untrustworthy research. We live in a time when corporations and politicians are deliberately obfuscating the basic physics behind global warming due to human activity, which may lead to the literal extinction of the species.

Courtney Thomas, an American cancer researcher, is a postdoc in the Laboratory of Translational Oncology at EPFL. She is currently studying whether medications already available on the market can be repurposed for the treatment of colon cancer. She was, as James Beacham, one of the first in Switzerland who fought for the March for Science.

James Beacham is an American particle physicist with the ATLAS Experiment, a post-doctoral researcher with the Ohio State University, based full-time at CERN, where he searches for evidence of exotic Higgs bosons, dark matter, extra dimensions of space, and gravitons.

These enemies of science may seem laughable to scientists — but they're winning. And we wanted to start to figure out why. Why is France the country with the highest percentage of skepticism of vaccine safety among its citizens? Why do so many people continue to espouse the categorically erroneous idea that unscientific and ill-defined criteria such as race or ethnicity correlate with intelligence? Why are 70% of Americans unable to name an actual living scientist? The March for Science wasn't a self-congratulatory parade in the park but a mandatory response to an emergency situation.

We marched in Geneva because we no longer had a choice.

But at the same time, we marched in Geneva because Switzerland is a unique example of a great place to be a scientist, and we wanted this example to be shared with the world.

One of our primary goals with the March — attended by over 600 people from all corners of Switzerland, more than twice as many as we'd anticipated — was to demonstrate that science is not separate from the populace but is embedded in the fiber of community. We wanted to remind the world that biochemists and physicists are your neighbors; that you rely upon technological and medical breakthroughs every day; and that you began life as a curious little kid, so you are still secretly a scientist yourself.

Science belongs to everyone. Looking out over the crowd at the rally before the march, it was wonderful to see a sea of



many different faces — the parent who is also a climate researcher; the climber who happens to be a science communications professional; the drummer who does physics, as well. We wanted the March for Science, Geneva, as much as possible, to represent everyone who is affected by science.

And since science belongs to everyone, this also means that science isn't controlled by only one person and derives its power through evidence and independent vetting of results by peers. One of the most impressive aspects of our Geneva march was how this attitude manifests in our organizing. The March for Science, Geneva, was organized by a grassroots committee — Tien-Tien Yu, John Warner, Giordon Stark, Clara Nellist, Robert Langenberg, Tova Holmes, Hannah Herde, Lukas Heinrich, Sabine Fleury, Babette Döbrich, Daphne Donis, Cari Cesarotti, and Elizabeth Brost, as well as the present authors — acting in our capacities as private, concerned citizens. Our major decisions were made slowly and deliberately, to ensure consensus and to facilitate as many perspectives and criticisms as possible.

Our first main task among the organizing team was to craft our mission and vision statements. We spent weeks examining every word, to ensure we had a message we could all support. It was not easy, given the multitude of voices, but it was an essential step in shaping the March for Science, Geneva, and demonstrating its difference from other marches around the world. This patience and deliberation not only ensured that our message was robust and represented us all, but accurately reflected both the cautiousness exercised in scientific research itself and the diplomacy and inclusiveness for which the Geneva region is renowned. And it was only possible to manage the practical aspects of organizing the march and the following "Celebration of Science" through a communal effort and a trust — built up over months of working together — that each person was supported by and could rely upon the other members of the committee.

This in itself was one of the greatest achievements of the March for Science, Geneva. Through our collective organization we successfully embodied the idea that science is a community, and that science belongs to everyone.

One message that was very important to us (and one that we spoke about to reporter Serena Tinari in the Italian-speaking region of Switzerland) was that everyone felt they could participate in the march. Inclusion was a key message in our planning meetings. While clearly there were political motivations for the march, we did our best to be as non-partisan as possible.

But it is inaccurate to say that science and politics have nothing to do with one another. Science is often used to motivate policy decisions, and politics impacts science research by, for example, determining funding levels and immigration



James Beacham, CERN, listing the reasons to march in a speech before the March.

policies for skilled researchers. However, scientific fact has no political leaning. Science and politics are linked, but science and political persuasion do not need to be.



Switzerland is a wonderful place to be a scientist. There is public support for science and scientists in the form of funding, interest in research outcomes, and support of scientific and technological advancements. But even here we are not immune to the populist political and social attitudes that are driving anti-science movements around the globe. The Swiss government affirmed its commitment to a healthy research community by stepping in and arranging to compensate for some of the EU funding lost when the Swiss people voted to limit immigration levels in 2014, but the fact that the vote occurred at all indicates a need for diligence. In order for us to continue to support science and be supported by the public, we must remain attentive. We must ensure that we are communicating and interacting with the public, and we must examine new ways to reconnect the populace with not just the benefits of research that they enjoy every day but with the scientific ways of thinking and with the essential benefits inherent in the free flow of people and researchers, without which such benefits wouldn't have been possible.

Science belongs to everyone, but this also means that science is the responsibility of everyone. Another of the main components of the March for Science was to acknowledge and more fully understand why some groups of people would not necessarily agree that science belongs to them. History is filled with examples of atrocities committed — based on race, gender, religion, sexual identity, disability, and socioeconomic class — in the name of or using the tools of science. But science is also filled with invisible and unspoken walls that prevent diversity. For example, women and per-

sons of color face systematic barriers that keep them from career advancement and from attaining the highest ranks in research organizations and universities. There is an underrepresentation of women in science and technology enterprises. In academia, women receive less funding and less money to start their research labs. In science and technology, women make up less than 25% of the workforce. People of color make up even less of the scientific workforce (in and out of academia), and endure discrimination and hostility. For science to truly be for everyone, we need to acknowledge, confront, and remove the barriers — both explicit and structural — that perpetuate these biases. In many countries, the March for Science started as a political movement to shine a light on politicians who are seeking to harm the scientific process or limit transparency in scientific results. It is now time for us to hold up a mirror to ourselves and see how we can use this momentum to find better ways to communicate with the Swiss public and encourage a new, diverse generation of scientists who will shape the research of the future.

We're just now planning how to leverage the momentum from the March into continued advocacy for science, robust science funding, and to maintain the vital connections between science and the general population. This is, indeed, the best way to ensure that we are a citizenry who know how to resist authoritarian, anti-science political movements.

Political awareness among scientists is no longer optional, but is now simply part of global citizenship. The stakes are too high to remain passive or silent. If we encounter aggressive undermining of both the credibility of the scientific endeavor and the free flow of information and people that ensures a vibrant scientific community, our response must be similarly strong and sustained.

The March for Science, Geneva, may have begun on 22 April 2017, but to ensure that science remains a vital component of a healthy, open, and inclusive society, we're still marching today.

Join us (contact@marchforsciencegeneva.org) !

Swiss Academies: <http://akademien-schweiz.ch/createsend1.com/t/ViewEmail/d/0DBD554E68894A6B/65D074C1E21514DCC9C291422E3DE149>
 The editorial of the EPS President in EPN 48-2: <http://www.europhysics-news.org/articles/epn/pdf/2017/02/epn2017-48-2.pdf>
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